COMMONWEALTH OF VIRGINIA

Information Technology Resource Management

WEB SITE GUIDELINE

Virginia Information Technologies Agency (VITA)

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This chart contains a history of revisions to this ITRM publication's revisions.

Version	Date	Purpose of Revision
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Revision 1		

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PREFACE

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Subject

Web Site Guideline

Effective Date

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Supersedes

None

Scheduled VITA Review

One (1) year from the effective date, then every two years thereafter.

Value Statement

Implementing this Guideline has several advantages for the Agency that will also benefit the Web site visitor. The Agency will benefit from reduced maintenance cost by avoiding dependence on a unique provider and proprietary formats, while gaining the advantage of the backward- and even forward-compatibility. Search engine time will be reduced and creating new content will be easier and more economical. Additionally, an accessible Web site broadens an Agency's potential audience and makes the Web site much more usable for everyone.

Authority/

Code of Virginia, §§ 2.2-2005 – 2.2-2032.
(Creation of the Virginia Information Technologies Agency; "VITA"; Appointment of Chief Information Officer (CIO))

Code of Virginia, §2.2-2457; §2.2-2458
(Powers and Duties of the Information Technology Investment Board; the "Board")

Code of Virginia §2.2-3803
(Administration of systems including personal information; Internet privacy policy)

Code of Virginia, § 2.2-2012
(*Procurement of Information Technology and Telecommunications Goods and Services; Computer Equipment to be based on Performance-based Specifications*)

Code of Virginia, § 2.2-3500 et seq.
(*Information Technology Access Act: Assurance of Non-visual Access for the Blind and Visually Impaired*)

Code of Virginia, § 51.5-1 et seq.
(Virginians with Disabilities Act)

Scope

This ITRM Guideline is advisory in nature and contain no requirements. This guideline is provided for the benefit of all state agencies and institutions of higher education (hereinafter collectively referred to as "Agency") that are responsible for supporting a Web site.. This guideline may also be beneficial to local government entities.

Purpose

Sharing best practices related to the functions of Web sites may aid Agencies in reducing cost, improving management practices, and improving services and tools for the government and its citizens. Web site architecture should be an enterprise solution that focuses on the needs of citizens and businesses. Its design should be intuitive, easy to use, and accessible, without jargon, confusing program names, and acronyms.

Objective

To provide Agencies with guidance related to Web site design and implementation as part of an overall effort to utilize the power of the Internet to reach citizens, regardless of handicap or income, promote establishment of a state Web site presence, and link all Executive Branch Web sites to the state portal, virginia.gov.

General Responsibilities

In accordance with the *Code of Virginia*, the following provisions apply with respect to Commonwealth Information Technology Resource Management (ITRM).

The Virginia Information Technologies Agency (VITA)
VITA is responsible for the development and adoption of policies, standards, and guidelines for the:

- management of information technology by Agencies; and
- procurement of information technology and telecommunications goods and services of every description for Agencies.

The Chief Information Officer of the Commonwealth (CIO)
The CIO's responsibilities include directing the formulation and promulgation of policies, guidelines, standards, and specifications for the purchase, development, and maintenance of information technology.

The Information Technology Investment Board (the Board)
The Board approves policies, standards, and guidelines recommended by the Chief Information Officer for the use

of information technology by Agencies in the Executive Branch of state government.

All State Agencies
Agencies are required to:

- cooperate with the Secretary of Technology, the CIO, and the Virginia Information Technologies Agency in the performance of their powers and duties; and
- comply with the Virginia Information Technologies Agency's policies, standards, and guidelines for information technology resources in the Commonwealth.

Related ITRM Policies, Standards, and Guidelines

ITRM Standard GOV106-00: Web Site Standard

ITRM Policy GOV105-00: Web Site Policy

ITRM Standard GOV103-00: Virginia Information Technology Accessibility Standard

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1. BACKGROUND

This Guideline brings together relevant best practices that affect Web site services provisioned by state Agencies. The guidelines provided in this document have been approved by the Information Technology Investment Board (ITIB).

2. APPROACH

This document will provide: 1) a listing of Web site related best practices, 2) reference materials together with Web sites related to the guidance provided, and 3) a general discussion of how state Agencies would typically implement the practices.

3. REVIEWS

Every effort will be made to ensure that guidance in this document will be reviewed one (1) year from the effective date and then every two years thereafter. As reviews are conducted, the review dates and recommended modifications will be added to this document.

4. STATEMENT OF GUIDELINE FOR WEB SITES

The following Information Technology Resource Management (ITRM) best practices address the use of common Web site templates and accessibility guidelines across all state agencies' Web sites and the state Internet portal, virginia.gov[1]. Implementation of these best practices provides a user[2]-focused Web presence for the Commonwealth.

4.1. Web Content Accessibility

For more details on any of the Web Content Accessibility guidelines, please see the referenced checkpoint in the World Wide Web Consortium's Web Accessibility Initiative's (WAI) Web Content Accessibility Guidelines (WCAG). Please see WCAG checkpoints: http://www.w3.org/TR/WCAG10/full-checklist.htm

4.1.1. Use Markup and Style Sheets and Do So Properly.

- When an appropriate markup language exists, use markup rather than images to convey information WAI WCAG checkpoint 3.1

- Use relative rather than absolute units in markup language attribute values and style sheet property values. WAI WCAG checkpoint 3.4

[1] The virginia.gov portal hosted by Virginia Interactive (VIPNet) provides citizens and business a single, electronic gateway to all government-related information.

[2] In the case of government Web sites, a "user" is any customer of that site, targeted or untargeted. It is possible for a customer base to have several sub-groups of users, in which case it is acceptable to target specific user groups.

- Markup lists and list items properly since ordered lists help non-visual users navigate. WAI WCAG checkpoint 3.6

4.1.2. Create Tables That Transform Gracefully.

- Do not use tables for layout unless the table makes sense when linearized. If the table does not make sense, provide an alternative equivalent, which may be a linearized version. WAI WCAG checkpoint 5.3
- Provide summaries for data tables. WAI WCAG checkpoint 5.5

4.1.3. Ensure That Pages Featuring New Technologies Transform Gracefully.

- For scripts and applets, ensure that event handlers are input device-independent. WAI WCAG checkpoint 6.4

4.1.4. Ensure User Control of Time-Sensitive Content Changes.

- Until user agents provide the ability to stop auto-redirect, do not use markup to redirect pages automatically. Instead, configure the server to perform redirects. WAI WCAG checkpoint 7.5

4.1.5. Design for Device-Independence.

- Create a logical tab order through links, form controls, and objects. WAI WCAG checkpoint 9.4

4.1.6. Use Interim Solutions.

- Until user agents, including assistive technologies, render adjacent links distinctly, include non-link, printable characters (surrounded by spaces) between adjacent links. WAI WCAG checkpoint 10.5

4.1.7. Provide Context and Orientation Information.

- Divide large blocks of information into more manageable groups where natural and appropriate. WAI WCAG checkpoint 12.3

4.1.8. Provide Clear Navigation Mechanisms.

- Clearly identify the target of each link. WAI WCAG checkpoint 13.1
- Provide information about the general layout of a site (e.g., a site map or table of contents). WAI WCAG checkpoint 13.3
- Use navigation mechanisms in a consistent manner. WAI WCAG checkpoint 13.4

4.2. User Agent Accessibility Guideline

4.2.1. Real-time Customer Service.

- Agencies that deal directly with a large group of constituencies on a regular basis should consider implementing real-time, online customer service such as the interactive customer service "Live Help" feature on the virginia.gov portal.

4.2.2. Search Engines That Return Useful Results.

- Having a search engine is not sufficient if that search engine returns results that are either too numerous to wade through, or too vague to understand. The solution to this problem requires effort on two fronts. First, Web sites should use a search engine technology that is able to handle the needs of their audience. Second, and possibly the most important, is that all Web pages should use proper META[3] tag information to allow search engines to present useable results.

4.2.3. Support Input and Output Device-Independence.

- Ensure that the user can interact with the user agent (and the content it renders) through different input and output devices. Since people use a variety of devices for input and output, user agent developers need to ensure redundancy in the user interface. The user may have to operate the user interface with a variety of input devices (e.g., keyboard, pointing device, and voice input) and output modalities (e.g., graphical, speech, or braille rendering). Though it may seem contradictory, enabling full user agent operation through the keyboard is an important part of promoting device-independence in target user agents.

4.2.4. Ensure User Access to All Content.

- Ensure that users have access to all content, notably conditional content that may have been provided to meet the requirements of the Web Content Accessibility Guidelines 1.0 [WCAG10].

4.2.5. Allow Configuration Not to Render Some Content that May Reduce Accessibility.

- Ensure that the user may turn off rendering of content (e.g., audio, video, scripts) that may reduce accessibility by obscuring other content or disorienting the user. Some content or behavior specified by the author may make the user agent unusable or may obscure information. For instance, flashing content may trigger seizures in people with photosensitive epilepsy, or may make a Web page too distracting to be usable by someone with a cognitive disability. Blinking text can affect screen reader users, since screen readers (in conjunction with speech synthesizers or braille displays) may re-render the text every time it blinks. Distracting background images, colors, or sounds may make it impossible for users to see or hear other content. Dynamically changing Web content may cause problems for some

[3] A META tag is a tag (that is, a coding statement) in the Hypertext Markup Language (HTML) that describes some aspect of the contents of a Web page. The information provided in a meta tag is used by search engines to index a page so that someone searching for the kind of information the page contains will be able to find it. The META tag is placed near the top of the HTML in a Web page as part of the heading.

assistive technologies. Scripts that cause unanticipated changes (e.g., viewports that open without notice or automatic content retrieval) may disorient some users with cognitive disabilities.

4.2.6. Ensure User Control of Rendering.

- Allow the user to override author-specified styles and user agent default styles. Providing access to content includes enabling users to configure and control its rendering. Users with low vision may require that text be rendered at a size larger than the size specified by the author or by the user agent's default rendering. Users with color blindness may need to impose or prevent certain color combinations.

4.2.7. Ensure User Control of User Interface Behavior.

- Ensure that the user can control or is warned about the behavior of viewports, including those that may be manipulated by the author (e.g., through scripts). Control of viewport behavior is important to accessibility. Unexpected changes to the point of regard — what the user is presumed to be viewing — may cause users to lose track of how many viewports are open, or which viewport has the current focus. If carried out automatically, these changes might go unnoticed (e.g., by some users with blindness) or be disorienting (e.g., to some users with a cognitive disability).

4.2.8. Observe Operating Environment Conventions.

- Observe operating environment conventions for the user agent user interface, documentation, input configurations, and installation. Part of user agent accessibility involves following the conventions of the user's operating environment, including:
    - Following operating environment conventions for user agent user interface design, documentation, and installation.
    - Incorporating operating environment-level user preferences into the user agent. For instance, some operating systems include settings that allow users to request high-contrast colors (for users with low vision) or graphical rendering of audio cues (for users with hearing disabilities).

4.2.9. Provide Navigation Mechanisms.

- Provide access to content through a variety of navigation mechanisms, including sequential navigation, direct navigation, searches, and structured navigation, as appropriate. Users should be able to navigate to important pieces of content within a configurable view, identify the type of object they have navigated to, interact with that object easily (if it is an enabled element), and review the surrounding context (to orient themselves). Providing a variety of navigation and search mechanisms helps users with disabilities (and all users) access content more efficiently. Navigation and searching are particularly important to users with serial access to content or who navigate sequentially (by moving the focus).
- Direct navigation (e.g., to a particular link or paragraph) is faster than sequential navigation, but generally requires familiarity with the content. Direct navigation is

important to users with some physical disabilities (who may have little or no manual dexterity and/or increased tendency to push unwanted buttons or keys) and to users with visual disabilities. Expert users also benefit from direct navigation. Direct navigation may be possible with the pointing device or the keyboard (e.g., keyboard shortcuts).

- Structured navigation mechanisms offer both context and speed. User agents should allow users to navigate to content known to be structurally important, such as blocks of content, headers and sections, tables, forms and form elements, enabled elements, navigation mechanisms, and containers.

4.2.10. Orient the User.

- Provide information that will help the user understand browsing context. All users require clues to help them understand their "location" when browsing: where they are, how they got there, where they can go, and what is nearby.

4.2.11. Provide Accessible User Agent Documentation and Help.

- Ensure that the user can learn about software features that benefit accessibility from the documentation. Ensure that the documentation is accessible. The user can find the User Agent Accessibility Guidelines (UAAG) and checkpoints at: http://www.w3.org/TR/WAI-USERAGENT
- Documentation of the user interface is important, as is documentation of the user agent's underlying functionalities. While intuitive user interface design is valuable to many users, some users may still not be able to understand or be able to operate the native user interface without thorough documentation. For instance, a user with blindness may not find a graphical user interface intuitive without supporting documentation.
- There are three types of best practices in this guideline:
  - accessibility of the documentation (WAI UAAG checkpoint 12.1),
  - minimal requirements of what must be documented (WAI UAAG checkpoints 12.2, 12.3, and 12.4). Documentation should include much more to explain how to install, get help for, use, or configure the user agent, and
  - organization of the documentation (WAI UAAG 12.5).

RESOURCES

Additional resources and information (validation information, accessibility standards information, compliancy information, code examples, etc.) may be found on the Web Accessibility Template Guide (WATG) site: http://www.vadsa.org/watg .

GLOSSARY

(Note: The source of those terms followed by (†) is the User Agent Accessibility Guidelines 1.0 (UAAG) located on the Web at: http://www.w3.org/TR/2002/REC-UAAG10-20021217/glossary.html#u)

Author-specified Styles: (†)
Authors styles are style property values that come from content (e.g., style sheets within a document, that are associated with a document, or that are generated by a server). "

Banner Image: For the purposes of the Commonwealth of Virginia Web template, a "banner image" is the graphic used between the top navigation bar and the main content (on the home page template) or the top navigation bar and the lower breadcrumb bar (on the sub-page template). The image is 50 pixels high and should gracefully handle resolutions at least as wide as 1024 pixels.

Bread Crumbs: Bread crumb navigation shows the users where they are and how the information is structured. Because users see the way the hierarchy is structured they can learn it more easily. By making each label a link, the users can quickly browse up the hierarchy. Bread Crumbs take up minimal space on the page and leave most of the space for the real content.

Configure, Control: (†)
"In the context of this document [UAAG], the verbs "to control" and "to configure" share in common the idea of governance such as a user may exercise over interface layout, user agent behavior, rendering style, and other parameters required by this document [UAAG]. Generally, the difference in the terms centers on the idea of persistence. When a user makes a change by "controlling" a setting, that change usually does not persist beyond that user session. On the other hand, when a user "configures" a setting, that setting typically persists into later user sessions. Furthermore, the term "control" typically means that the change can be made easily (such as through a keyboard shortcut) and that the results of the change occur immediately. The term "configure" typically means that making the change requires more time and effort (such as making the change via a series of menus leading to a dialog box, or via style sheets or scripts). The results of "configuration" might not take effect immediately (e.g., due to time spent reinitializing the system, initiating a new session, or rebooting the system).
In order to be able to configure and control the user agent, the user needs to be able to "write" as well as "read" values for these parameters. Configuration settings may be stored in a profile. The range and granularity of the changes that can be controlled or configured by the user may depend on limitations of the operating environment or hardware.
Both configuration and control can apply at different "levels": across Web resources (i.e., at the user agent level, or inherited from the operating environment), to the entirety of a Web resource, or to components of a Web resource (e.g., on a per-element basis).
A **global configuration** is one that applies across elements of the same Web resource, as well as across Web resources.
User agents may allow users to choose configurations based on various parameters, such as hardware capabilities or natural language preferences."

Content: (†)
"In this specification, the noun "content" is used in three ways.

- It is used to mean the document object as a whole or in parts.
- It is used to mean the content of an HTML or XML element, in the sense employed by the XML 1.0 specification ([XML], section 3.1): "The text between the start-tag and end-tag is called the element's content." Context should indicate that the term content is being used in this sense.
- It is used in the terms non-text content and text content."

Control: (†)
See Configure, Control.

Device-independence: (†)
"In this document [UAAG], device-independence refers to the desirable property that operation of a user agent feature is not bound to only one input or output."

Documentation: (†)
"Documentation refers to information that supports the use of a user agent. This information may be found, for example, in manuals, installation instructions, the help system, and tutorials. Documentation may be distributed (e.g., some parts may be delivered on CD-ROM, others on the Web). See guideline 12 for information about documentation requirements. "

Downloadable Documents: "Downloadable documents (e.g. Adobe PDF, a Microsoft PowerPoint presentation, a Microsoft Word document or equivalent) are defined as stand-alone documents that open an embedded process. These documents will require a plug-in link be provided on the Web policy page and the page from which the document is accessed.

Enabled element, disabled element: (†)
"An enabled element is a piece of content with associated behaviors that can be activated through the user interface or through an API. The set of elements that a user agent enables is generally derived from, but is not limited to, the set of interactive elements defined by implemented markup languages.
Some elements may only be enabled elements for part of a user session. For instance, an element may be disabled by a script as the result of user interaction. Or, an element may only be enabled during a given time period (e.g., during part of a SMIL 1.0 [SMIL] presentation). Or, the user may be viewing content in "read-only" mode, which may disable some elements.
A disabled element is a piece of content that is potentially an enabled element, but is not in the current session. One example of a disabled element is a menu item that is unavailable in the current session; it might be "grayed out" to show that it is disabled. Generally, disabled elements will be interactive elements that are not enabled in the current session. This document [UAAG] distinguishes disabled elements (not currently enabled) from non-interactive elements (never enabled).
For the requirements of this document [UAAG], user selection does not constitute user interaction with enabled elements. See the definition of content focus.
Note: Enabled and disabled elements come from content; they are not part of the user agent user interface.
Note: The term "active element" is not used in this document [UAAG] since it may suggest several different concepts, including: interactive element, enabled element, an element "in the process of being activated" (which is the meaning of: active in CSS2 [CSS2], for example)."

Equivalent: Content is "equivalent" to other content when both fulfill essentially the same function or purpose upon presentation to the user. In the context of this document, the equivalent must fulfill essentially the same function for the person with a disability (in as feasible a manner as possible, given the nature of the disability and the state of technology) as the primary content does for the person without any disability. For example, the text "The Full Moon" might convey the same information as an image of a full moon when presented to users. Note that equivalent information focuses on fulfilling the same function. If the image is part of a link and understanding the image is crucial to guessing the link target, an equivalent must also give users an idea of the link target.

Frames: In creating a Web site, frames is the use of multiple, independently controllable sections on a Web presentation. This effect is achieved by building each section as a separate HTML file and having one "master" HTML file identify all of the sections. When a user requests a Web page that uses frames, the address requested is actually that of the 'master"' file that defines the frames. The result of the request is that multiple HTML files are returned, one for each visual section. Links in one frame can request another file that will appear in another (or the same) frame. A typical use of frames is to have one frame containing a selection menu in one frame and another frame that contains the space where the selected (linked to) files will appear.

Focus, content focus, user interface focus, current focus: (†)
"In this document [UAAG], the term "content focus" (required by checkpoint 9.1) refers to a user agent mechanism that has all of the following properties:

- It designates zero or one element in content that is either enabled or disabled. In general, the focus should only designate enabled elements, but it may also designate disabled elements.
- It has state, i.e., it may be "set" on an enabled element, programmatically or through the user interface. Some content specifications (e.g., HTML, CSS) allow authors to associate behavior with focus set and unset events.
- Once it has been set, it may be used to trigger other behaviors associated with the enabled element (e.g., the user may activate a link or change the state of a form control). These behaviors may be triggered programmatically or through the user interface (e.g., through keyboard events).

User interface mechanisms may resemble content focus, but do not satisfy all of the properties. For example, designers of word processing software often implement a "caret" that indicates the current location of text input or editing. The caret may have state and may respond to input device events, but it does not enable users to activate the behaviors associated with enabled elements.
The user interface focus shares the properties of the content focus except that, rather than designating pieces of content, it designates zero or one control of the user agent user interface that has associated behaviors (e.g., a radio button, text box, or menu).
On the screen, the user agent may highlight the content focus in a variety of ways, including through colors, fonts, graphics, and magnification. The user agent may also highlight the content focus when rendered as synthesized speech, for example through changes in speech prosody. The dimensions of the rendered content focus may exceed those of the viewport.
In this document [UAAG], each viewport is expected to have at most one content focus and at most one user interface focus. This document [UAAG] includes requirements for content focus only, for user interface focus only, and for both. When a requirement refers to both, the term 'focus' is used.
When several viewports coexist, at most one viewport's content focus **or** user interface focus

responds to input events; this is called the current focus."

Graphical: (†)
"In this document [UAAG], the term "graphical" refers to information (including text, colors, graphics, images, and animations) rendered for visual consumption. "

Heading Elements: The six heading elements, *H1* through *H6*, denote section headings. Although the order and occurrence of headings is not constrained by the HTML DTD, documents should not skip levels (for example, from H1 to H3), as converting such documents to other representations is often problematic.
Example of use:

<H1>This is a heading</H1>
Here is some text

<H2>Second level heading</H2>
Here is some more text.

*H1*Typical renderings are:

H *1* Bold, very-large font, centered. One or two blank lines above and below.

H *2* Bold, large font, flush-left. One or two blank lines above and below.

H *3* Italic, large font, slightly indented from the left margin. One or two blank lines above and below.

H *4* Bold, normal font, indented more than H3. One blank line above and below.

H *5* Italic, normal font, indented as H4. One blank line above.

H *6* Bold, indented same as normal text, more than H5. One blank line above.

(For further information see the XHTML Quick Reference Guide: http://www.mit.edu/~ddcc/xhtmlref/heading.html)

Home Page: For a Web user, the home page is the first Web page that is displayed after starting a Web browser like Netscape's Navigator or Microsoft's Internet Explorer. The browser is usually preset so that the home page is the first page of the browser manufacturer. However, you can set the home page to open to any Web site. For example, you can specify that "http://www.yahoo.com" be your home page. You can also specify that there be no home page (a blank space will be displayed) in which case you choose the first page from your bookmark list or enter a Web address.

For a Web site developer, a home page is the first page presented when a user selects a site or presence on the World Wide Web. The usual address for a Web site is the home page address, although you can enter the address (Uniform Resource Locator) of any page and have that page sent to you.

Navigate Sequentially:
See Serial Access, Sequential Navigation.

Operating environment: (†)
"The term 'operating environment' refers to the environment that governs the user agent's operation, whether it is an operating system or a programming language environment such as Java."

Point of regard: (†)
The point of regard is a position in rendered content that the user is presumed to be viewing. The dimensions of the point of regard may vary. For example, it may be a point (e.g., a moment during an audio rendering or a cursor position in a graphical rendering), or a range of text (e.g., focused text), or a two-dimensional area (e.g., content rendered through a two-dimensional graphical viewport). The point of regard is almost always within the viewport, but it may exceed the spatial or temporal dimensions of the viewport (see the definition of rendered content for more information about viewport dimensions). The point of regard may also refer to a particular moment in time for content that changes over time (e.g., an audio-only presentation). User agents may determine the point of regard in a number of ways, including based on viewport position in content, content focus, and selection. The stability of the point of regard is addressed by guideline 5 and checkpoint 9.4.

Serial Access, Sequential Navigation: (†)
"In this document [UAAG], the expression 'serial access' refers to one-dimensional access to rendered content. Some examples of serial access include listening to an audio stream or watching a video (both of which involve one temporal dimension), or reading a series of lines of braille one line at a time (one spatial dimension). Many users with blindness have serial access to content rendered as audio, synthesized speech, or lines of braille.
The expression 'sequential navigation' refers to navigation through an ordered set of items (e.g., the enabled elements in a document, a sequence of lines or pages, or a sequence of menu options). Sequential navigation implies that the user cannot skip directly from one member of the set to another, in contrast to direct or structured navigation (see guideline 9 for information about these types of navigation). Users with blindness or some users with a physical disability may navigate content sequentially (e.g., by navigating through links, one by one, in a graphical viewport with or without the aid of an assistive technology). Sequential navigation is important to

users who cannot scan rendered content visually for context and also benefits users unfamiliar with content. The increments of sequential navigation may be determined by a number of factors, including element type (e.g., links only), content structure (e.g., navigation from heading to heading), and the current navigation context (e.g., having navigated to a table, allow navigation among the table cells).
Users with serial access to content or who navigate sequentially may require more time to access content than users who use direct or structured navigation.

Server: In general, a server is a computer program that provides services to other computer programs in the same or other computers. The computer that a server program runs in is also frequently referred to as a server (though it may contain a number of server and client programs). In the client/server programming model, a server is a program that awaits and fulfills requests from client programs in the same or other computers. A given application in a computer may function as a *client* with requests for services from other programs and also as a *server* of requests from other programs. Specific to the Web, a Web server is the computer program (housed in a computer) that serves requested HTML pages or files. A Web *client* is the requesting program associated with the user. The Web browser in your computer is a client that requests HTML files from Web servers

Target user agents: (†)
This document [UAAG] was designed specifically to improve the accessibility of user agents with multimedia capabilities running in the following type of environment (typically that of a desktop computer):

- The operating environment includes a keyboard (or keyboard equivalent)
- Assistive technologies may be used in the operating environment and may communicate with the conforming user agent

The target user agent is one designed for the general public to handle general-purpose content in ordinary operating conditions.
This document [UAAG] does not *forbid* conformance by other types of user agents, but some requirements (e.g., implementation of certain application programming interfaces, or APIs) are not likely to be satisfied in environments (e.g., handheld devices or kiosks) other than the target environment. Future work by the UAWG may address the accessibility of user agents running on handheld devices, for example.
Technologies not addressed directly by this document [UAAG] (e.g., those for braille rendering) will be essential to ensuring Web access for some users with disabilities. Note that the ability of conforming user agents to communicate well with assistive technologies will depend in part on the willingness of assistive technology developers to follow the same standards and conventions for communication.

User Agent: (†)
Any software that retrieves and renders Web content for users. This may include Web browsers, media players, plug-ins, and other programs — including assistive technologies — that help in retrieving and rendering Web content. For further explanation see: http://www.w3.org/TR/2002/REC-UAAG10-20021217/glossary.html#u)

User Agent Default Styles: (†)
User agent default styles are style property values applied in the absence of any author or user styles. Some markup languages specify a default rendering for content in that markup language; others do not. For example, XML 1.0 [XML] does not specify default styles for XML documents. HTML 4 [HTML4] does not specify default styles for HTML documents, but the CSS 2 [CSS2] specification suggests a sample default style sheet for HTML 4 based on current practice.

User Interface: (†)
For the purposes of this document [UAAG], user interface includes both:

- the ***user agent user interface***, i.e., the controls (e.g., menus, buttons, prompts, and other components for input and output) and mechanisms (e.g., selection and focus) provided by the user agent ("out of the box") that are not created by content.
- the 'content user interface,' i.e., the enabled elements that are part of content, such as form controls, links, and applets.

The document [UAAG] distinguishes them only where required for clarity. For more information, see the section on requirements for content, for user agent features, or both.
The term 'user interface control' refers to a component of the user agent user interface or the content user interface, distinguished where necessary.

Validator: A service or system that verifies that a page meets standards. (See: WATG)

Viewport: (†)
"The user agent renders content through one or more viewports. Viewports include windows, frames, pieces of paper, loudspeakers, and virtual magnifying glasses. A viewport may contain another viewport (e.g., nested frames). User agent user interface controls such as prompts, menus, and alerts are not viewports.
Graphical and tactile viewports have two spatial **dimensions**. A viewport may also have temporal dimensions, for instance when audio, speech, animations, and movies are rendered. When the dimensions (spatial or temporal) of rendered content exceed the dimensions of the viewport, the user agent

provides mechanisms such as scroll bars and advance and rewind controls so that the user can access the rendered content "outside" the viewport. Examples include: when the user can only view a portion of a large document through a small graphical viewport, or when audio content has already been played.
When several viewports coexist, only one has the current focus at a given moment. This viewport is highlighted to make it stand out.
User agents may render the same content in a variety of ways; each rendering is called a *view*. For instance, a user agent may allow users to view an entire document or just a list of the document's headers. These are two different views of the document."

WAI Level A: The Web Accessibility Initiative (WAI) is part of the World Wide Web Consortium (W3C), the organization that maintains Web standards and best practices. WAI is responsible for the guidelines used internationally to make the Web accessible, and their current rating system is broken down into Leval A, Level AA, and the most stringent level, Level AAA. More information can be obtained from their Web site at http://www.w3.org/TR/WCAG10/.

WCAG: The Web Content Accessibility Guidelines 1.0 is part of a series of accessibility guidelines published by the Web Accessibility Initiative. The series also includes User Agent Accessibility Guidelines ([WAI-USERAGENT]) and Authoring Tool Accessibility Guidelines ([WAI-AUTOOLS]).

Web Site: A related collection of World Wide Web (WWW) files that includes a beginning file called a home page.

Web Application: A software program that uses HTTP for its core communication protocol and delivers Web-based information to the user in the HTML language. Also called a Web-based application.

W3C: The World Wide Web Consortium http://www.w3.org is a forum for information, commerce, communication, and collective understanding. (W3C) develops interoperable technologies (specifications, guidelines, software, and tools) to lead the Web to its full potential.